Douglas County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors
10/3/14

22 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Douglas County economy.[1]

These 22 sectors have a total direct output of approximately $323 million and support 1,328.3 jobs in Douglas County. Running the model for all 22 sectors simultaneously produces the following results:

Agriculture Contribution in Douglas Co

Impact Type[2]	Employment	% Employment	Total Value Added[3]	% of Gross Regional Product[4]	Output[5]	% of Gross Regional Product
Direct Effect	1,328.3	2%	85,630,300.5	2%	322,713,220.7	8%
Indirect Effect	277.6	0%	24,943,311.9	1%	42,825,653.5	1%
Induced Effect	347.0	1%	23,477,263.1	1%	36,886,896.6	1%
Total Effect	1,953.0	3%	134,050,875.5	3%	402,425,770.8	10%

As shown in the above table, agriculture, food, and food processing supports 1,953.0 jobs, or 3% of the entire workforce in the county. These industries provide a total economic contribution of approximately $402 million, roughly 10% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 22 agriculture, food, and food processing sectors is approximately $134 million, or 3% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 3% of the total economy.

1 Article on building a contribution analysis in IMPLAN that avoids double counting: http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

2 Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3 Value added = labor income + indirect business taxes + other property type income.

4 GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

5 Output = intermediate inputs + value added.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

In the top ten by employment, Cattle ranching and farming is the top employer in the agriculture industry with 305.6 employees. This table also shows the amount of jobs that are created by the agriculture industry in Douglas County.

Description	Total Employment	Total Output
Cattle ranching and farming	305.6	50,506,457.7
Grain farming	292.5	17,938,784.7
Animal production, except cattle and poultry and eggs	235.1	12,568,496.6
Oilseed farming	116.8	19,833,372.0
Support activities for agriculture and forestry	111.7	147,068.3
Dog and cat food manufacturing	109.8	148,239,625.3
Food services and drinking places	71.7	3,896,981.3
Real estate establishments	56.5	7,844,895.1
Fruit and vegetable canning, pickling, and drying	43.4	24,470,825.5
Wholesale trade businesses	38.6	7,358,453.5

The Dog and cat food manufacturing industry directly contributes approximately $148 million to Douglas County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Description	Total Employment	Total Output
Dog and cat food manufacturing	109.8	148,239,625.3
Cattle ranching and farming	305.6	50,506,457.7
Fruit and vegetable canning, pickling, and drying	43.4	24,470,825.5
Oilseed farming	116.8	19,833,372.0
Grain farming	292.5	17,938,784.7
Animal production, except cattle and poultry and eggs	235.1	12,568,496.6
Commercial hunting and trapping	12.2	9,495,505.3
Real estate establishments	56.5	7,844,895.1
Monetary authorities and depository credit intermediation activities	22.9	7,794,530.7
Wholesale trade businesses	38.6	7,358,453.5

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Douglas County's economy.

Description	Employment	Output
Oilseed farming	118.36	19,568,981.17
Grain farming	296.40	17,699,649.81
Vegetable and melon farming	2.88	1,625,418.42
Fruit farming	1.07	689,350.66
Tree nut farming	0.19	52,010.32
Greenhouse, nursery, and floriculture production	5.31	2,560,371.64
All other crop farming	16.98	6,366,146.56
Cattle ranching and farming	309.78	49,831,886.29
Dairy cattle and milk production	19.71	4,101,093.77
Poultry and egg production	0.36	331,909.27
Animal production, except cattle and poultry and eggs	238.26	12,400,630.00
Commercial logging	1.43	64,797.51
Commercial hunting and trapping	12.41	9,306,813.24
Support activities for agriculture and forestry	116.40	141,121.28
Dog and cat food manufacturing	111.44	145,999,755.86
Frozen food manufacturing	17.13	6,115,016.94
Fruit and vegetable canning, pickling, and drying	44.90	23,681,398.39
Bread and bakery product manufacturing	11.62	2,294,628.14
Cookie, cracker, and pasta manufacturing	11.45	5,620,047.09
Snack food manufacturing	8.54	6,293,144.23
All other food manufacturing	5.98	2,102,981.81
Farm machinery and equipment manufacturing	0.91	481,264.71
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All 105 counties in Kansas have Implan models and agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.